IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appl. No.:	10/650,257	)	Confirmation No.:	**7452**
Applicant:	Davda	)	TC/A.U.	2192
Filed:	08/27/2003	)	Examiner:	Wei
Docket No.:	4366-120	)		
For:	METHOD AND APPARATUS FOR HOT UPDATING OF RUNNING PROCESSES	)		

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Sir:

Applicant submits this Comments on Statement of Reasons for Allowance to address further the Notice of Allowability ("Notice") having a mailing date of September 17, 2010.

In the Notice, the Examiner's stated reasons for allowance were that:

> Claims 6, 8, 14, 15, 20 and 21 are allowed. As the Board pointed out in the decision on appeal mailed on 06/23/2010, the closest cited prior art of Buban reference as cited by Examiner (paragraph [046-0047]) e.g. "moving to the beginning of patched code, or to the front of patched instructions, does not, by itself, teach determining a distance. The rejection fails to show how moving backwards to the beginning of patched code, or moving forward to the front of patched instructions, teaches determining a first distance between a position within said code text at which execution of said executable program code is stopped and an address of a first function", and in as such manners as similar limitation recited in independent claims 6, 14 and 20, and thus each of the dependent claims are allowable for at least the same reasons.

Based on the Notice, the patentability of all other independent and dependent claims is assumed to be based upon the elements as set forth in such claims and that such claims meet all criteria for patentability under §101, §102, §103 and §112.

As is clear from MPEP 1302.14,

> "The statement [of reasons for allowance] is not intended to necessarily state all the reasons for allowance or all the details why claims are allowed and should not be written to specifically or impliedly state that all the reasons for allowance are set forth."

While the above-stated may be a stated reason for allowing some independent claims, Applicant submits that some independent claims have a different reason for allowance and/or that some independent claims have other reasons for allowance.

Specifically, the prior art fails to teach the following features of Claims 6, 14 and 20:

> 6. A method for updating a running process, comprising:
>
> allocating in executable program code text first memory space operable to receive new program instructions comprising at least a first updated function:
>
> allocating in executable program code text second memory space operable to receive address information related to said new program instructions:
>
> running said executable program code;
>
> stopping execution of said executable program code;
>
> injecting a jump instruction and an address of an update table at a location in a memory containing a first instruction of a first replaced function, wherein said address of said update table contains an address of a first instruction of said first updated function:
>
> resuming execution of said executable program code, wherein said first updated function is called in place of said first replaced function, and wherein said executable code is updated in said memory;
>
> determining a first distance between a position within said code text at which execution of said executable program code is stopped and an address of a first function,
>
> wherein said first function is a function to be updated; and
>
> in response to said first distance exceeding a predetermined amount, populating an update table stored in memory with an address of a first updated function.

> 14. A computer implemented method, the method comprising:
>
> receiving information identifying:
>
> a running executable program to be patched: and
>
> a function to be replaced;
>
> accessing a symbol table in a memory for said executable program to be patched;
>
> obtaining from said symbol table an address of said function to be replaced;
>
> stopping execution by a processor of said running executable program to be patched;

injecting in said running executable program to be patched at a location in said memory containing a first instruction of said function to be replaced a jump instruction and an address of a new function, wherein said new function is executed by said processor in place of said function to be replaced, and wherein a patched version of said executable program is created in said memory;

resuming execution of said executable program by said processor, wherein said patched version of said executable program is executed by said processor; and

determining a number of bytes between a location within said executable program at which said executable program is stopped and an address of said function to be replaced.

20. A system for updating executing program code, comprising:

a create patch tool operable to receive information identifying an executable program to be updated and a function to be replaced;

a patch tool operable to query an operating system for a process identifier associated with said identified executable program;

a debugging utility operable to stop execution of said executable program to be updated and to determine a position of an instruction pointer associated with said executable program to be updated; and

a signal handler tool operable to replace in memory an address of said function to be replaced with an address of a replacement function in response to said position of said instruction pointer being at least a predetermined distance from said address of said replacement function, wherein said replacement function is executed instead of said function to be replaced upon resuming execution of said executable program, wherein said executable program is updated.

Although the Applicant believes that no fees are due for filing this Comments on Statement of Reasons for Allowance, please charge any fees deemed necessary to Deposit Account No. 19-1970.

Respectfully submitted,

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